6706505

09724126

Figure 1A

SEQ ID NO:

6	mouse_E3αII	MASEMEPEVQ AID-RSLLEC SAEEIAGRWL QATDLNREVY QHLAHCVPKI				49
4	human_E3αII	MASELEPEVQ AID-RSLLEC SAEEIAGKWL QATDLTREVY QHLAHYVPKI				49
15	mouse_E3αI	MADEEMDGAE RMDVSPEPPL APQRPASVWD QQVDFYTAFL HHLAQLVPEI				50
2	human_E3αI	MADEEAGGTE RMEISAELPQ TPQRLASVWD QQVDFYTAFL HHLAQLVPEI				50
	Consensus	MA.E..... ..D...L... .....A.W.. Q..D...... .HLA..VP.I				50

6	mouse_E3αII	YCRGPNPFPQ KEDTLAQHIL LGPMEWICA EDPALGFPKL EQANKPSHLC				99
4	human_E3αII	YCRGPNPFPQ KEDMLAQHVL LGPMEWLCG EDPAFGFPKL EQANKPSHLC				99
15	mouse_E3αI	YFAEMDPDLE KQEESVQMSI LTPLEWLFG EDPDICLEKL KHSG-AFQLC				99
2	human_E3αI	YFAEMDPDLE KQEESVQMSI FTPLEWLFG EDPDICLEKL KHSG-AFQLC				99
	Consensus	Y.....P... K.....Q... L.P.EWL.G. EDP..... .KL ...LC				100

6	mouse_E3αII	GRVFKVGEPT YSCRDCAVDP TCVLCMECFL GSIHRDHRYR MTTSGGGGFC				149
4	human_E3αII	GRVFKVGEPT YSCRDCAVDP TCVLCMECFL GSIHRDHRYR MTTSGGGGFC				149
15	mouse_E3αI	GKVFKSGETT YSCRDCAIDP TCVLCMDCFQ SSVHKNHRYK MHTSTGGGFC				149
2	human_E3αI	GRVFKSGETT YSCRDCAIDP TCVLCMDCFQ DSVHKNHRYK MHTSTGGGFC				149
	Consensus	GRVFK.GE.T YSCRDCA.DP TCVLCM.CF. .S.H.HRY. M.TS.GGGFC				150

6	mouse_E3αII	DCGDTEAWKE GPYCQKHKLS SSEVVEEEDP LVHLSEDVIA RTYNIFAIMF				199
4	human_E3αII	DCGDTEAWKE GPYCQKHELN TSEIEEEEDP LVHLSEDVIA RTYNIFAITF				199
15	mouse_E3αI	DCGDTEAWKT GPFCVDHEPG RAGTTKESLH -CPLNEEVIA QARRIFPSVI				198
2	human_E3αI	DCGDTEAWKT GPFCVNHEPG RAGTIKENSR -CPLNEEVIV QARKIFPSVI				198
	Consensus	DCGDTEAWK. GP.C..HE.. .....E.... .L.E.VIA ...IF.....				200

Figure 1B

```
6   mouse_E3αII   RYAVDILTWE KESELPEDLE VAEKSDTYYC MLFNDEVHTY EQVIYTLQKA   249
4   human_E3αII   RYAVEILTWE KESELPADLE MVEKSDTYYC MLFNDEVHTY EQVIYTLQKA   249
15  mouse_E3αI    KYIVEMTIWE EEKELPPELQ IREKNERYYC VLFNDEHHSY DHVIYSLQRA   248
2   human_E3αI    KYVVEMTIWE EEKELPPELQ IREKNERYYC VLFNDEHHSY DHVIYSLQRA   248
    Consensus     .Y.VE...WE .E.ELP..L. ..EK...YYC .LFNDE.H.Y ..VIY.LQ.A   250

6   mouse_E3αII   VNCTQKEAIG FATTVDRDGR RPVRYGDFQY CDQAKTVIVR NTSRQTK-PL   298
4   human_E3αII   VNCTQKEAIG FATTVDRDGR RSVRYGDFQY CEQAKSVIVR NTSRQTK-PL   298
15  mouse_E3αI    LDCELAEAQL HTTAIDKEGR RAVKAGVYAT CQEAKEDIKS HSENVSQHPL   298
2   human_E3αI    LDCELAEAQL HTTAIDKEGR RAVKAGAYAA CQEAKEDIKS HSENVSQHPL   298
    Consensus     ..C...EA.. ..T..D..GR R.V.G.... C..AK.I... ......PL   300

6   mouse_E3αII   KVQVMHSSVA AHQNFGLKAL SWLGSVIGYS DGLRRILCQV GLQEGPDGEN   348
4   human_E3αII   KVQVMHSSIV AHQNFGLKLL SWLGSIIGYS DGLRRILCQV GLQEGPDGEN   348
15  mouse_E3αI    HVEVLHSVVM AHQKFALRLG SVMNKIMSYS SDFRQIFCQA CLVEEPGSEN   348
2   human_E3αI    HVEVLHSEIM AHQKFALRLG SVMNKIMSYS SDFRQIFCQA CLREEPDSEN   348
    Consensus     .V.V.HS... AHQ.F.L.L. SW...I..YS ..R.I.CQ. .L.E.PD.EN   350
```

Figure 1C

6	mouse_E3αII	SSLVDRLMLN	DSKLWKGARS	VYHQLFMSSL	LMDLKYKKLF	ALRFAKNYRQ	398
4	human_E3αII	SSLVDRLMLS	DSKLWKGARS	VYHQLFMSSL	LMDLKYKKLF	AVRFAKNYQQ	398
15	mouse_E3αI	PCLISRLMLW	DAKLYKGARK	ILHELIFSSF	FMEMEYKKLF	AMEFVKYYKQ	398
2	human_E3αI	PCLISRLMLW	DAKLYKGARK	ILHELIFSSF	FMEMEYKKLF	AMEFVKYYKQ	398
	Consensus	..L..RLML.	D.KL.KGAR.	..H.L..SS.	.M..YKKLF	A..F.K.Y.Q	400
6	mouse_E3αII	LQRDFMEDDH	ERAVSVTALS	VQFFTAPTLA	RMLTEENLM	TVIIKAFMDH	448
4	human_E3αII	LQRDFMEDDH	ERAVSVTALS	VQFFTAPTLA	RMLITEENLM	SIIIKTFMDH	448
15	mouse_E3αI	LQKEYISDDH	ERSISITALS	VQMLTVPTLA	RHLIEEQNVI	SVITETLLEV	448
2	human_E3αI	LQKEYISDDH	DRSISITALS	VQMFTVPTLA	RHLIEEQNVI	SVITETLLEV	448
	Consensus	LQ.....DDH	ER..S.TALS	VQ.FT.PTLA	R.LI.E.N.	SVI..T...	450

Figure 1D

SEQ ID NO:

```
6   mouse_E3αII  LKHRDAQGRF  QFERYTALQA  FKFRRVQSLI  LDLKYVLISK  PTEWSDELRQ  498
4   human_E3αII  LRHRDAQGRF  QFERYTALQA  FKFRRVQSLI  LDLKYVLISK  PTEWSDELRQ  498
15  mouse_E3αl   LPEYLDRNN-  KFN-FQGYSQ  DKLGRVYAVI  CDLKYILISK  PVIWTERLRA  496
2   human_E3αl   LPEYLDRNN-  KFN-FQGYSQ  DKLGRVYAVI  CDLKYILISK  PTIWTERLRM  496
    Consensus.   L........  F........   .K..RV...I  .DLKY.LISK  PT.W...LR.  500

6   mouse_E3αII  KFLQGFDAFL  ELLKCMQGMD  PITRQVGQHI  EMEPEWEAAF  TLQMKLTHVI  548
4   human_E3αII  KFLEGFDAFL  ELLKCMQGMD  PITRQVGQHI  EMEPEWEAAF  TLQMKLTHVI  548
15  mouse_E3αl   QFLEGFRSFL  KILTCMQGME  EIRRQVGQHI  EVDPDWEAAI  AIQMQLKNIL  546
2   human_E3αl   QFLEGFRSFL  KILTCMQGME  EIRRQVGQHI  EVDPDWEAAI  AIQMQLKNIL  546
    Consensus.   .FLEGF..FL  ..L.CMQGM.  .I.RQVGQHI  E..P.WEAA.  ..QM.L....  550

6   mouse_E3αII  SMMQDWCALD  EKVLIEAYKK  CLAVLTQCHG  GFTDGEQPIT  LSICGHSVET  598
4   human_E3αII  SMMQDWCASD  EKVLIEAYKK  CLAVLMQCHG  GYTDGEQPIT  LSICGHSVET  598
15  mouse_E3αl   LMFQEWCACD  EDLLLVAYKE  CHKAVMRCST  NFMSTKTV-   VQLCGHSLET  595
2   human_E3αl   LMFQEWCACD  EELLLVAYKE  CHKAVMRCST  SFISSSKTV-  VQSCGHSLET  595
    Consensus.   .M.Q.WCA.D  E.L..AYK.   C....M.C..  .F........  ...CGHS.ET  600
```

Figure 1E

```
6   mouse_E3αII  IRYCVSQEKV SIHLPISRLL AGLHVLLSKS EVAYKFPELL PLSELSPPML  648
4   human_E3αII  IYCVSQEKV  SIHLPVSRLL AGLHVLLSKS EVAYKFPELL PLSELSPPM   648
15  mouse_E3αI   KSYKVSEDLV SIHLPLSRTL AGLHVRLSRL GAISRLHEFV PFDSFQVEVL  645
2   human_E3αI   KSYRVSEDLV SIHLPLSRTL AGLHVRLSRL GAVSRLHEFV SFEDFQVEVL  645
    Consensus    .Y.VS...V  SIHLP.SR.L AGLHV.LS.. ......E..  P.......L   650

6   mouse_E3αII  IEHPLRCLVL CAQVHAGMMR RNGFSLVNQI YYYHNVKCRR EMFDKDIVML  698
4   human_E3αII  IEHPLRCLVL CAQVHAGMMR RNGFSLVNQI YYYHNVKCRR EMFDKDVVML  698
15  mouse_E3αI   VEYPLRCLVL VAQVVAEMMR RNGLSLISQV FYYQDVKCRE EMYDKDIIML  695
2   human_E3αI   VEYPLRCLVL VAQVVAEMMR RNGLSLISQV FYYQDVKCRE EMYDKDIIML  695
    Consensus    .E.PLRCLVL .AQV.A.MMR RNG.SL..Q. .YY..VKCR. EM.DKDI.ML  700

6   mouse_E3αII  QTGVSMMDPN HFLMMLSRF  ELYQLFSTPD YGKRFSSEVT HKDVVQQNNT  748
4   human_E3αII  QTGVSMMDPN HFLMMLSRF  ELYQIFSTPD YGKRFSSEIT HKDVVQQNNT  748
15  mouse_E3αI   QIGASIMDPN KFLLLVLQRY EL-----TDA FNKTIST--K DQDLIKQYNT  738
2   human_E3αI   QIGASLMDPN KFLLLVLQRY EL-----AEA FNKTIST--K DQDLIKQYNT  738
    Consensus    Q.G.S.MDPN .FL..L.R.  EL....T..  .K.S.....  .D..Q.NT    750
```

Figure 1F

6	mouse_E3αII	LI EEMLYLI I	MLVGERFNPG	VGQVAATDEI	KREIIHQLSI	KPMAHSELVK	798
4	human_E3αII	LI EEMLYLI I	MLVGERFSPG	VGQVNATDEI	KREIIHQLSI	KPMAHSELVK	798
15	mouse_E3αI	LI EEMLQVLI	YIVGERYVPG	VGNVTREEVI	MREITHLLCI	EPMPHSAI AR	788
2	human_E3αI	LIEEMLQVLI	YIVGERYVPG	VGNVTKEEVT	MREIIHLLCI	EPMPHSAI AK	788
	Consensus	LIEEML...I	..VGER.PG	VG.V.....I	.REIIH.L.I	.PM HS...K	800
6	mouse_E3αII	SLPEDENKET	GMESVIESVA	HFKKPGLTGR	GMYELKPECA	KEFNLYFYHF	848
4	human_E3αII	SLPEDENKET	GMESVIEAVA	HFKKPGLTGR	GMYELKPECA	KEFNLYFYHF	848
15	mouse_E3αI	NLPENENNET	GLENVINKVA	TFKKPGVSGH	GVYELKDESL	KDFNMYFYHY	838
2	human_E3αI	NLPENENNET	GLENVINKVA	TFKKPGVSGH	GVYELKDESL	KDFNMYFYHY	838
	Consensus	.LPE.EN.ET	G.E.VI..VA	.FKKPG..G.	G.YELK.E..	K.FN.YFYH.	850
6	mouse_E3αII	SRAEQSKAEE	AQRKLKRENK	EDTALPPPAL	PPFCPLFASL	VNILQCDVML	898
4	human_E3αII	SRAEQSKAEE	AQRKLKRQNR	EDTALPPPVL	PPFCPLFASL	VNILQSDVML	898
15	mouse_E3αI	SKTQHSKAEH	MQKKRRKQEN	KDEALPPPPP	PEFCPAFSKV	VNLLSCDVML	888
2	human_E3αI	SKTQHSKAEH	MQKKRRKQEN	KDEALPPPPP	PEFCPAFSKV	INLLNCDIMM	888
	Consensus	S....SKAE.	.Q.K..Q..	.D.ALPPP..	P.FCP.F...	VN.L.CDVML	900

Figure 1G

SEQ ID NO:

```
6   mouse_E3αII   YIMGTILQWA  VEHHGSAWSE  SMLQRVLHLI  GMALQEEKHH  LENAVEGHVQ   948
4   human_E3αII   CIMGTILQWA  VEHNGYAWSE  SMLQRVLHLI  GMALQEEKQH  LENVTEEHVV   948
15  mouse_E3αI    YILRTIFERA  VDTESNLWTE  GMLQMAFHIL  ALGLLEEKQQ  LQKAPEEEV-   937
2   human_E3αI    YILRTVFERA  IDTDSNLWTE  GMLQMAFHIL  ALGLLEEKQQ  LQKAPEEEV-   937
    Consensus     YI..TI...A  V......WE   .MLQ...H..  ...L.EEKQ.  L..A.EE.V.   950

6   mouse_E3αII   TFTFTQKISK  PGDAPHNSPS  ILAMETLQN   APSLEAHKDM  IRWLLKMFNA   998
4   human_E3αII   TFTFTQKISK  PGEAPKNSPS  ILAMETLQN   APYLEVHKDM  IRWLKTFNA    998
15  mouse_E3αI    AFDFYHKASR  LGSSAMNAQN  IQMLLERLKG  IPQLEGQKDM  ITWLQMFDT    987
2   human_E3αI    TFDFYHKASR  LGSSAMNIQM  L---LEKLKG  IPQLEGQKDM  ITWLQMFDT    984
    Consensus     TF.F.K.S.   .G....N..   I...LE.L..  .P.LE..KDM  I.WL.MF..    1000

6   mouse_E3αII   IKKIRE--CS  SSSPVAEAEG  TIMEESSRDK  DKAERKRKAE  IARLRREKIM   1046
4   human_E3αII   VKKMRE--SS  PTSPVAETEG  TIMEESSRDK  DKAERKRKAE  IARLRREKIM   1046
15  mouse_E3αI    VKRLREKSCL  VVATTSGLEC  IKSEEITHDK  EKAERKRKAE  AARLHRQKIM   1037
2   human_E3αI    VKRLREKSCL  IVATTSGSES  IKNDEITHDK  EKAERKRKAE  AARLHRQKIM   1034
    Consensus     VK..RE..C.  .........E. ....EE...DK .KAERKRKAE  .ARL.R.KIM   1050
```

Figure 1H

```
6   mouse_E3αII   AQMSEMQRHF  IDENKELFQQ  TLELDTSASA  TL--DSSPPV  SDAALTALGP  1094
4   human_E3αII   AQMSEMQRHF  IDENKELFQQ  TLELDASTSA  VL--DHSPVA  SDMTLTALGP  1094
15  mouse_E3αI    AQMSALQKNF  IETHKLMYDN  TSEVTGKEDS  IMEESTSAV   SEASRIALGP  1087
2   human_E3αI    AQMSALQKNF  IETHKLMYDN  TSEMPGKEDS  IMEESTPAV   SDYSRIALGP  1084
    Consensus     AQMS..Q.F   I...K....   T.E......   .....S.P.V  SD...ALGP   1100

6   mouse_E3αII   AQTQVPEPRQ  FVTCILCQEE  QEVTVGSRAM  VLAAFVQRST  VLSKDRTKTI  1144
4   human_E3αII   TQTQVPEQRQ  FVTCILCQEE  QEVKVESRAM  VLAAFVQRST  VLSKNRSKFI  1144
15  mouse_E3αI    KRGPAVTEKE  VLTCILCQEE  QEVKLENNAM  VLSACVQKST  ALTQHRGKPV  1137
2   human_E3α     KRGPSVTEKE  VLTCILCQEE  QEVKIENNAM  VLSACVQKST  ALTQHRGKPI  1134
    Consensus     .........   ..TCILCQEE  QEVK.E..AM  VL.A.VQ.ST  .L...R.K.I  1150

6   mouse_E3αII   AD-PEKYDPL  FMHPDLSCGT  HTGSCGHVMH  AHCWQRYFDS  VQAKEQRRQQ  1193
4   human_E3αII   QD-PEKYDPL  FMHPDLSCGT  HTSSCGHIMH  AHCWQRYFDS  VQAKEQRRQQ  1193
15  mouse_E3αI    DHLGETLDPL  FMDPDLAHGT  YTGSCGHVMH  AVCWQKYFEA  VQ--LSSQQ   1184
2   human_E3αI    ELSGEALDPL  FMDPDLAYGT  YTGSCGHVMH  AVCWQKYFEA  VQ--LSSQQ   1181
    Consensus     ...E..DPL   FM PDL..GT  .TGSCGHVMH  A.CWQ.YF..  VQ.....QQ   1200
```

Figure 11

```
 6  mouse_E3αII  RLRLHTSYDV  ENGEFLCPLC  ECLSNTVIPL  L-LPPRSILS  RRLN-FSDQP  1241
 4  human_E3αII  RLRLHTSYDV  ENGEFLCPLC  ECLSNTVIPL  L-LPPRNIFN  NRLN-FSDQP  1241
15  mouse_E3αI   RIHVDL-FDL  ESGEYLCPLC  KSLCNTVIPI  IPLQPQKINS  ENAEALAQLL  1233
 2  human_E3αI   RIHVDL-FDL  ESGEYLCPLC  KSLCNTVIPI  IPLQPQKINS  ENADALAQLL  1230
    Consensus    R......D.   E.GE.LCPLC  ..L.NTVIP.  ..L.P..I.S  ..........  1250

 6  mouse_E3αII  DLAQWRAVT   QQIKVVQMLR  RKHNAA-DTS  SSEDTEAMNI  IPIPEGFRPD  1290
 4  human_E3αII  NLTQWRTIS   QQIKALQFLR  KEESTP-NNA  STKNSENVDE  LQLPEGFRPD  1290
15  mouse_E3αI   TLARWQTVL   ARISGYNIKH  AKGEAPAVPV  LFNQGMGDST  FEFHSILSFG  1283
 2  human_E3αI   TLARWQTVL   ARISGYNIRH  AKGENP-IPI  FFNQGMGDST  LEFHSILSFG  1279
    Consensus    .LA.W.TV.   .I........  .K..P-...   ..........  ..........  1300

 6  mouse_E3αII  FYPRNPYSDS  IKEMLTTFGT  AAYKVGLKVH  PNEGDPRVPI  LCWGTCAYTI  1340
 4  human_E3αII  FRPKIPYSES  IKEMLTTFGT  ATYKVGLKVH  PNEEDPRVPI  MCWGSCAYTI  1340
15  mouse_E3αI   VQSSVKYSNS  IKEMILFAT   TIYRIGLKVP  PDELDPRVPM  MTWSTCAFTI  1333
 2  human_E3αI   VESSIKYSNS  IKEMILFAT   TIYRIGLKVP  PDERDPRVPM  LTWSTCAFTI  1329
    Consensus    ......YS.S  IKEM..F.T   .Y..GLKV.   P.E.DPRVP.  ..W.TCA.TI  1350
```
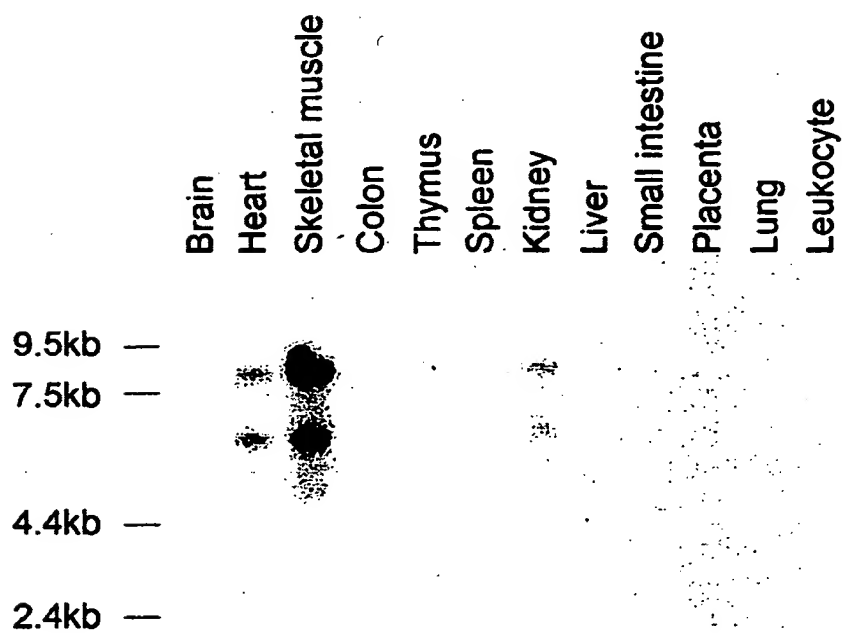
Figure 1J

SEQ ID NO:

```
6  mouse_E3αII    QSIERILSDE  EKPVFGPLPC  RLDDCLRSLT  RFAAAHWTVA  LLPVVQGHFC  1390
4  human_E3αII    QSIERILSDE  DKPLFGPLPC  RLDDCLRSLT  RFAAAHWTVA  SVSVVQGHFC  1390
15 mouse_E3αI     QAIENLLGDE  GKPLFGALQN  RQHSGLKALM  QFAVAQRATC  PQVLIHKHLA  1383
2  human_E3αI     QAIENLLGDE  GKPLFGALQN  RQHNGLKALM  QFAVAQRITC  PQVLIQKHLV  1379
   Consensus      Q.IE..L.DE  .KPLFG.L..  R.....L..L  .FA.A.....  .....Q.H..  1400

6  mouse_E3αII    KLFASLVPSD  SYEDLPCILD  IDMFHLLVGL  VLAFPALQCQ  D---FSGSSL  1437
4  human_E3αII    KLFASLVPND  SHEELPCILD  IDMFHLLVGL  VLAFPALQCQ  D---FSGISL  1437
15 mouse_E3αI     RLLSVILPNL  QSENTPGLLS  VDLFHVLVGA  VLAFPSLYWD  DTVDLQPSPL  1433
2  human_E3αI     RLLSVVLPNI  KSEDTPCLLS  IDLFHVLVGA  VLAFPSLYWD  DPVDLQPSSV  1429
   Consensus      .L.....PN.  ..E..PC.L.  ID.FH.LVG.  VLAFP.L...  D......SSL  1450

6  mouse_E3αII    ATG--DLHIF  HLVTMAHIVQ  ILLTSCTEEN  --GMDQENP  TGEEELAILS  1482
4  human_E3αII    GTG--DLHIF  HLVTMAHIIQ  ILLTSCTEEN  --GMDQENP  PCEEESAVLA  1482
15 mouse_E3αI     SSSYNHLYLF  HLITMAHMLQ  ILLTTDTDLS  PGPPLAEGEE  DSEEARCASA  1483
2  human_E3αI     SSSYNHLYLF  HLITMAHMLQ  ILLTVDTGL-  ---PLAQVQE  DSEEAHSASS  1475
   Consensus      ......L..F  HL.TMAH..Q  ILLT..T...  ----.Q....  ..EE......  1500
```

Figure 1K

```
6  mouse_E3αII  LHKTLHQYTG SALKEAPSGW HLWRSVRAAI MPFLKCSAL  FHYLNGVPAP 1532
4  human_E3αII  LYKTLHQYTG SALKEIPSGW HLWRSVRAGI MPFLKCSALF FHYLNGVPSP 1532
15 mouse_E3αI   FFVEVSQHTD GLTGCGAPGW YLWLSLRNGI TPYLRCAALL FHYLLGVAPP 1533
2  human_E3αI   FFAEISQYTS GSIGCDIPGW YLWVSLKNGI TPYLRCAALF FHYLLGVTPP 1525
   Consensus    ......QYT. ........GW .LW.S.R.GI .P.L.C.ALF FHYL.GV..P. 1550

6  mouse_E3αII  PDLQV-SGTS HFEHLCNYLS LPTNLIHLFQ ENSDIMNSLI ESWCQNSEVK 1581
4  human_E3αII  PDIQV-PGTS HFEHLCSYLS LPNNLICLFQ ENSEIMNSLI ESWCRNSEVK 1581
15 mouse_E3αI   EELFANSAEG EFSALCSYLS LPTNLFLLFQ EYWDTIRPLL QRWCGDPALL 1583
2  human_E3αI   EELHTNSAEG EYSALCSYLS LPTNLFLLFQ EYWDTVRPLL QRWCADPALL 1575
   Consensus    .L.....S... .F..LCSYLS LPTNL..LFQ E..D.....L. ..WC.......L. 1600

6  mouse_E3αII  RYLNGERGAI SYPRGANKLI DLPEDYSSLI NQASNFSCPK SGGDKSRAPT 1631
4  human_E3αII  RYLEGERDAI RYPRESNKLI NLPEDYSSLI NQASNFSCPK SGGDKSRAPT 1631
15 mouse_E3αI   KSLKQKSAVV RYPRKRNSLI ELPEDYSCLL NQASHFRCPR SADDERKHPV 1633
2  human_E3αI   NCLKQKNTVV RYPRKRNSLI ELPDDYSCLL NQASHFRCPR SADDERKHPV 1625
   Consensus    ..L........ RYPR..N.LI .LPEDYS.L. NQAS.F.CP. S..D....P. 1650
```

Figure 1L

```
6   mouse_E3αII  LCLVCGSLLC SQSYCCQAEL EGEDVGACTA HTYSCGSGAG IFLRVRECQV 1681
4   human_E3αII  LCLVCGSLLC SQSYCCQTEL EGEDVGACTA HTYSCGSGVG IFLRVRECQV 1681
15  mouse_E3αI   LCLFCGAILC SQNICCQEIV NGEEVGACVF HALHCGAGVC IFLKIRECRV 1683
2   human_E3αI   LCLFCGAILC SQNICCQEIV NGEEVGACIF HALHCGAGVC IFLKIRECRV 1675
    Consensus    LCL.CG..LC SQ..CCQ... .GE.VGAC.. H...CG.GV. IFL..REC.V 1700

6   mouse_E3αII  LFLAGKTKGC FYSPPYLDDY GETDQGLRRG NPLHLCQERF RKIQKLWQQH 1731
4   human_E3αII  LFLAGKTKGC FYSPPYLDDY GETDQGLRRG NPLHLCKERF KKIQKLWHQH 1731
15  mouse_E3αI   VLVEGKARGC AYPAPYLDEY GETDPGLKRG NPLHLSRERY RKLHLVWQQH 1733
2   human_E3αI   VLVEGKARGC AYPAPYLDEY GETDPGLKRG NPLHLSRERY RKLHLVWQQH 1725
    Consensus    ...GK..GC .Y..PYLD.Y GETD.GL.RG NPLHL..ER. RK....WQQH 1750

6   mouse_E3αII  SITEEIGHAQ EANQTLVGID WQHL  1755
4   human_E3αII  SVTEEIGHAQ EANQTLVGID WQHL  1755
15  mouse_E3αI   CIIEEIARSQ ETNQMLFGFN WQLL  1757
2   human_E3αI   CIIEEIARSQ ETNQMLFGFN WQLL  1749
    Consensus    .I.EEI...Q E.NQ.L.G.. WQ.L   1774
```

FIG. 2

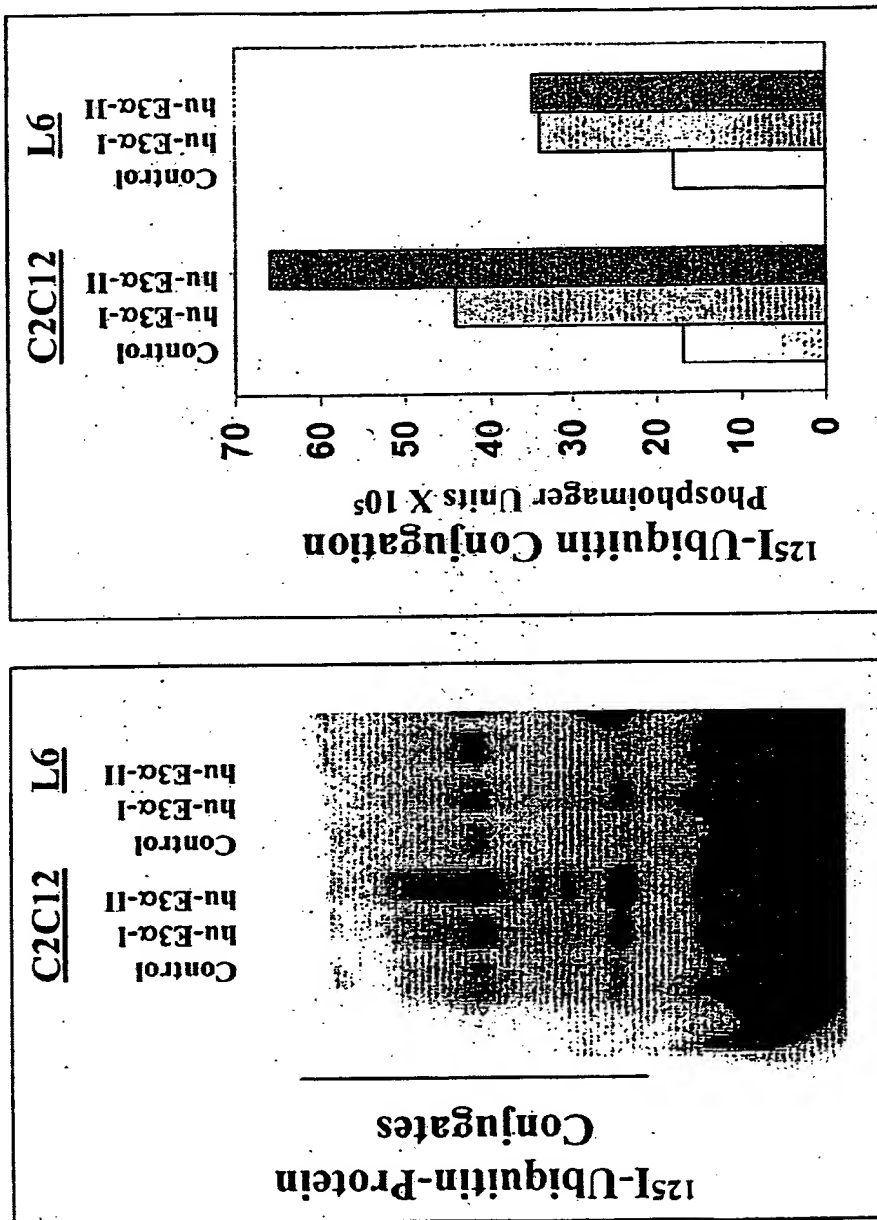**Tth Expression Profile of huE3α–II**
in Human Tissues

FIG. 3

Tth Expression Profile of huE3α-I in Human Tissues
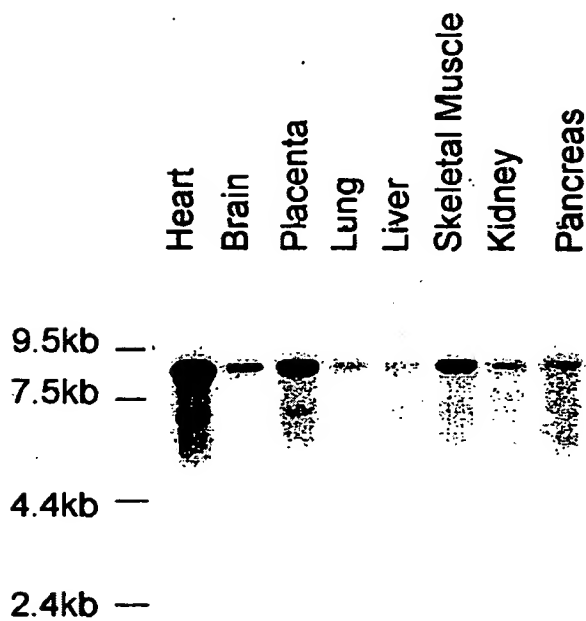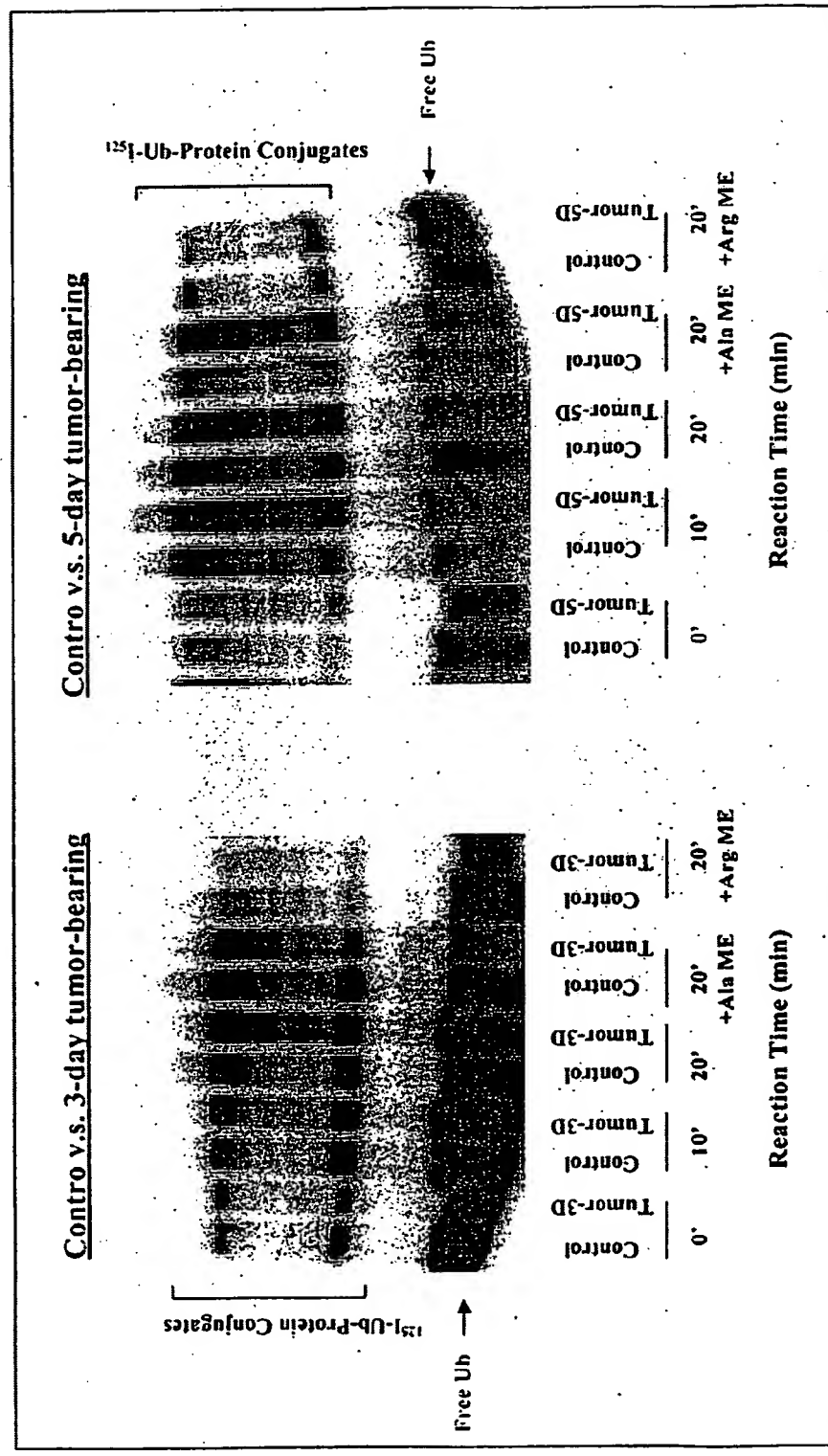
Figure 4
Ubiquitination of Endogenous Proteins
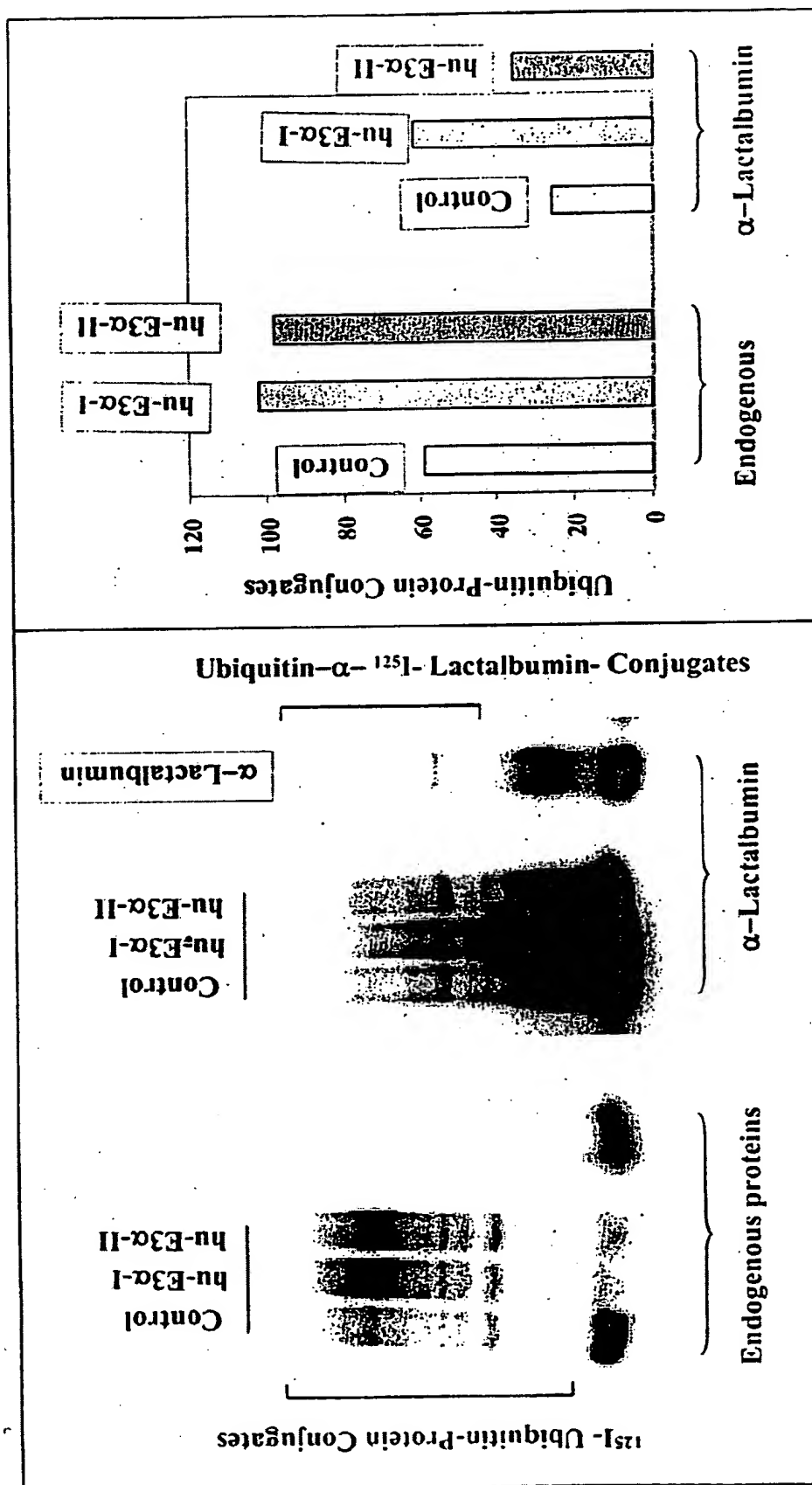
Figure 5

Transfection of Human E3a-I or E3a-II cDNA Stimulates Ubiquitin Conjugation in Cultured Muscle Cell Lines

Figure 6

^{125}I-Ubiquitin Conjugation to Muscle Proteins and its Sensitivity to E3α Inhibitor in Skeletal Muscle Extracts

Figure 7

Rates of Ubiquitination of N-end Rule Substrate α-Lactalbumin in Skeletal Muscle Extracts

Control v.s. 5 Day-Tumor-Bearing

^{125}I-Lactalbumin_Ub Conjugates

α-Lactalbumin

Control	Tumor-5D	Control	Tumor-5D	Control	Tumor-5D
5'		10'		20'	

Reaction Time (min)

Control v.s. 3 Day-Tumor-Bearing

α-Lactalbumin

Control	Tumor-3D	Control	Tumor-3D	Control	Tumor-3D
5'		10'		20'	

Reaction Time (min)

^{125}I-Lactalbumin_Ub Conjugates
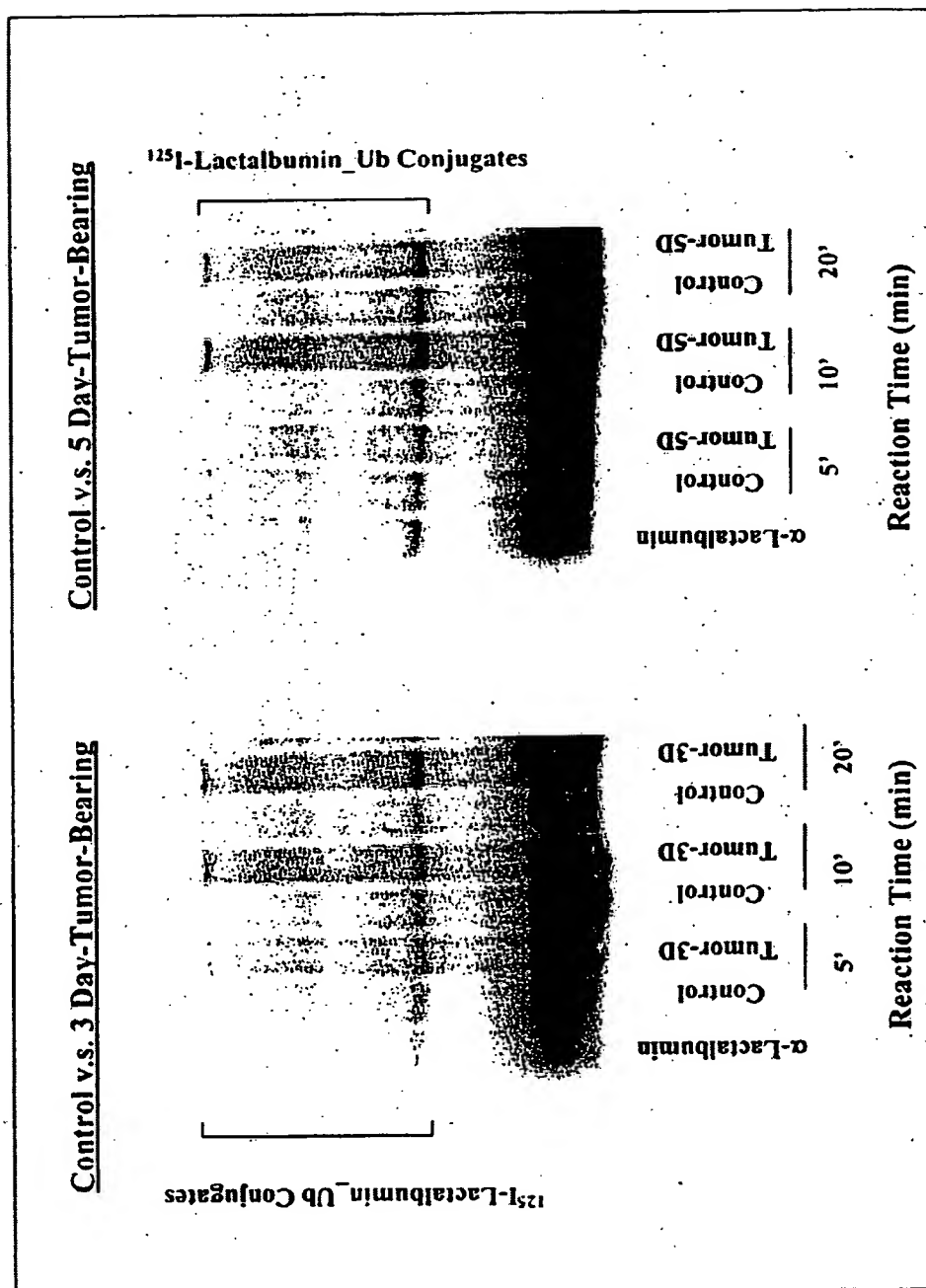
Figure 8

Northern blot analysis of E3α-I & E3α-II expression
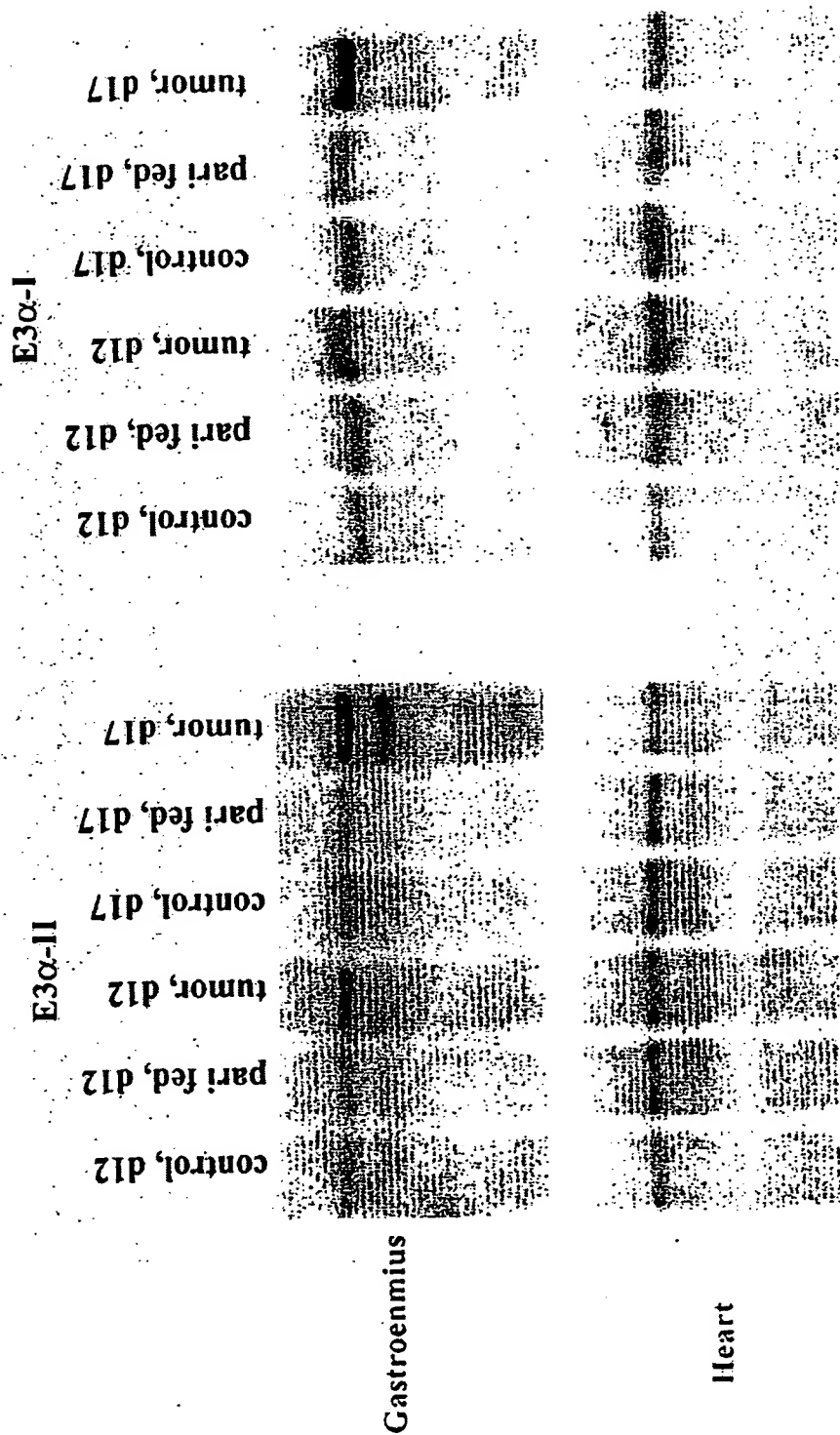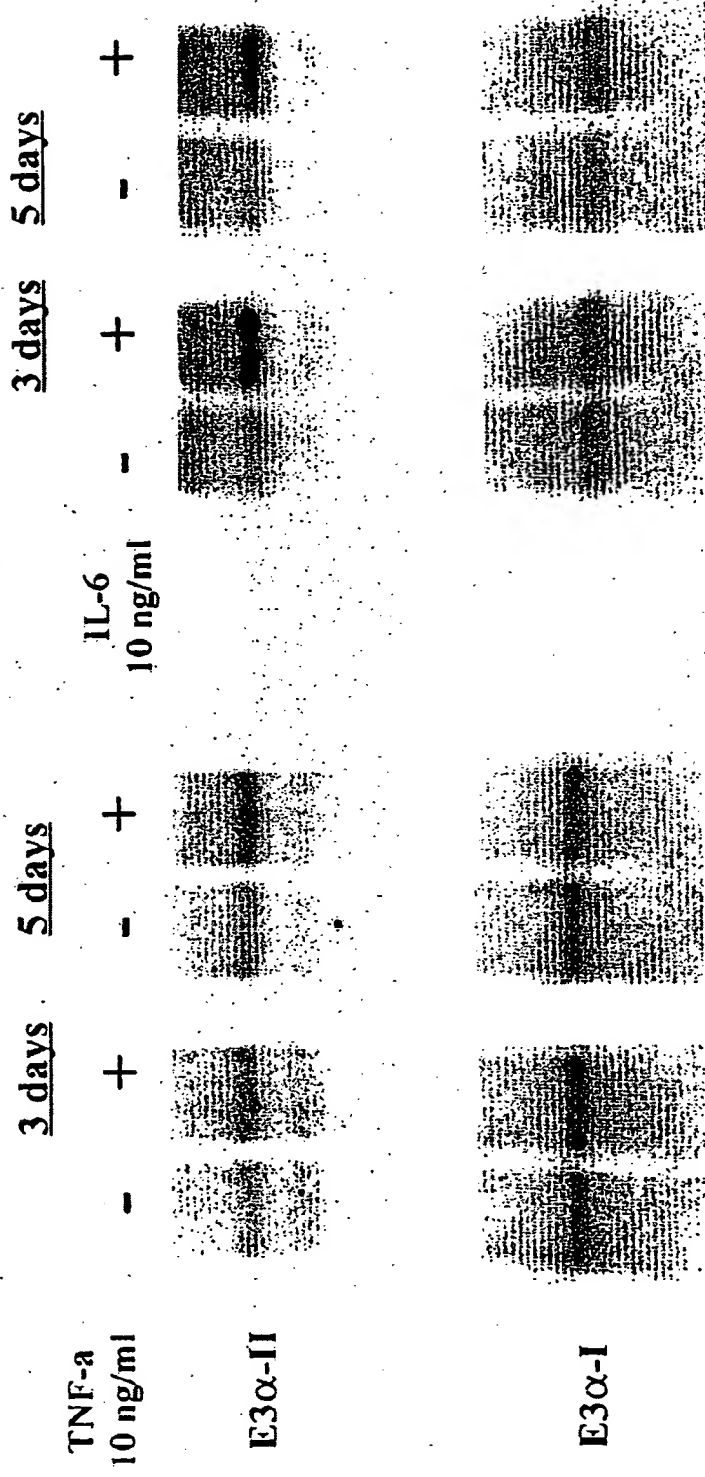## in gastrocnemius muscles in YAH-130 exprimental cachexia model
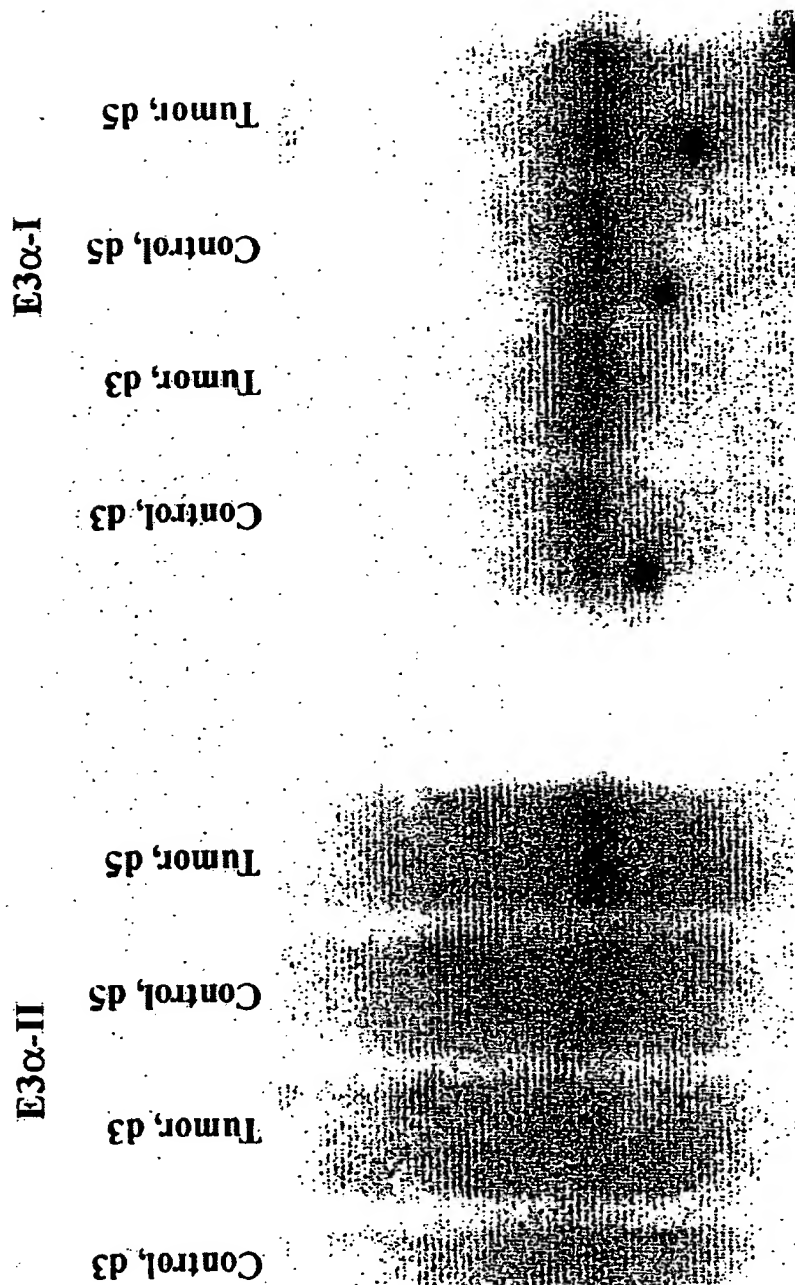
Figure 9

Northern blot analysis of E3α-I and E3α-II expression in gastrocnemius muscle and cardiac muscle in C26 experimental cachexia model
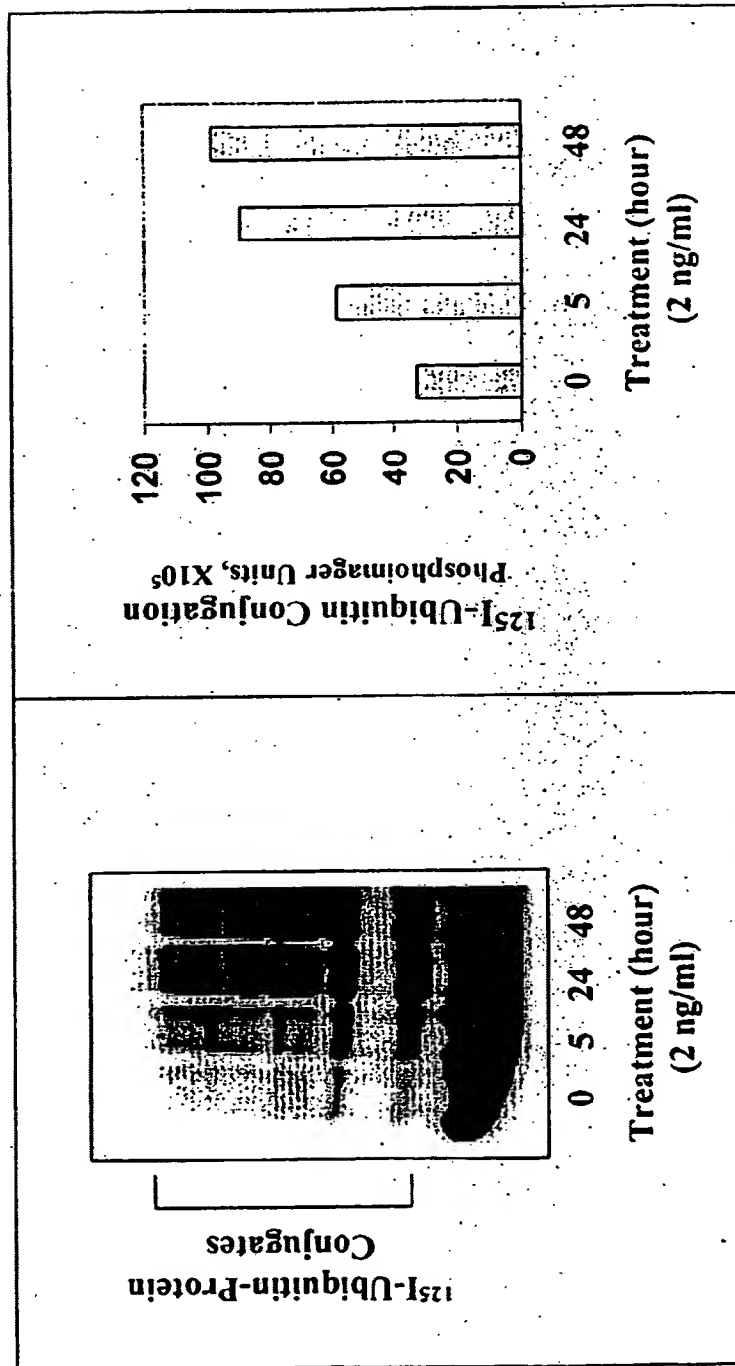
Figure 10

Proinflammatory cytokines TNF-α and IL-6 induce E3α-II Expression in C2C12 myostube culture

Figure 11

IL-6 Elicits Accelerated Ubiquitination in C2C12 Myotube Cultures

Figure 12

TNFα Elicits Accelerated Ubiquitination in C2C12 Myotube Cultures